

Specification	AXE40	Rev.: 1	Date: 2014-04-04
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**Oscillator type: Low Phase Noise VHF/UHF SPXO (no PLL)
with LVPECL or Sine Wave Output**

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	60		400	MHz	
Frequency stability				ppm	
Initial tolerance			±5	ppm	
vs. operating temperature range			±10	ppm	(Note 2)
vs. supply voltage variation			±2	ppm	$V_S \pm 5\%$
vs. load change			±2	ppm	Load ±5%
Long term (aging) per year			±2	ppm	@ 40°C
Frequency adjustment range					
Electronic Frequency Control (EFC)		N.A.		ppm	on request
RF output					
Signal waveform	Sine Wave LVPECL Complementary				Option 1 = "S" Option 1 = "L"
Output Level (Option 1 = "S")	+0			dBm	$R_L = 50 \Omega$ (Note 3)
Harmonics (Option 1 = "S")			-30	dBc	
Sub-harmonics (Note 4)			-40	dBc	
Output Levels (Option 1 = "L")					$R_L = 50 \Omega$ to $V_S - 2 V$ (Note 5)
HIGH (V_{OH})	2.215	2.345	2.420	V	
LOW (V_{OL})	1.470	1.595	1.745	V	
Supply voltage V_S	3.15	3.3	3.45	V	Option 2 = "33"
	4.75	5.0	5.25	V	Option 2 = "50"
Current consumption (steady state)			40	mA	(Note 6)
Operating temperature range	-20		+70	°C	
Enclosure (see drawing) (LxWxH)	20.5x20.5x12.5 max.			mm	IEC 60679-3 CO 41
Weight			8	g	
Packing	Palette				IEC 60286-3

Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Other stabilities over temperature on request
3. Higher output level on request
4. For frequencies above 100 MHz sub-harmonics may be present. Please consult factory
5. Output levels vary 1:1 with V_S
6. Current consumption depends on frequency, supply voltage and output option

Absolute Maximum Ratings

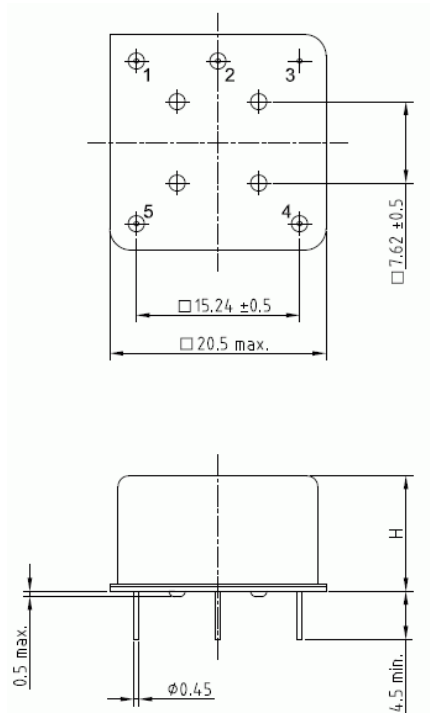
Parameter	min.	max.	Unit	Condition
Supply Voltage V_S	-0.5	$V_S + 10\%$	V	V_S to GND
Storage Temperature	-55	+125	°C	

Ordering Code

Model	Option 1 [RF output]	Option 2 [Supply Voltage]	Revision	Frequency [MHz]
AXE40	S or L	50	Rev.1	350.000

Example: AXE40-S-50_Rev.1 – 350.000 MHz

Enclosure drawing



Pin connections:

Pin #	Symbol	Function
1	N.C. \bar{Q}	No Connection (Option S) RF Output (\bar{Q}) (Option L)
2	RF OUT	RF Output (Q)
3	GND	Ground
4	N.C.	No Connection
5	V_S	Supply Voltage

Handling and Testing

Parameter	Procedure		Source
Handling and Testing	Application Note AXAN-011		www.axtal.com
Processing	Application Note AXAN-012		www.axtal.com
Parameter	Procedure		Condition
Electrostatic discharge (ESD)			
THD devices	IEC60749-26	HBM	2000 V
SMD devices	IEC60749-27	MM	200 V
Washable	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
RoHS compliant	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Environmental conditions

Test	IEC 60068 Part ...	IEC 60679-1 Clause	MIL-STD- 202G Method	MIL-STD- 810F Method	MIL-PRF- 55310D Clause	Test conditions (IEC)
Sealing tests (if applicable)	2-17	5.6.2	112E		3.6.1.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability Resistance to soldering heat	2-20 2-58	5.6.3	208H 210F		3.6.52 3.6.48	Test Ta Method 1 Test Td ₁ Method 2 Test Td ₂ Method 2
Shock*	2-27	5.6.8	213B	516.4	3.6.40	Test Ea, 3 x per axes 100g, 6 ms half-sine pulse
Vibration, sinusoidal*	2-6	5.6.7.1	201A 204D	516.4-4	3.6.38.1 3.6.38.2	Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 2 kHz, 10g
Vibration, random*	2-64	5.6.7.3	214A	514.5	3.6.38.3 3.6.38.4	Test Fdb
Endurance tests - ageing - extended aging		5.7.1 5.7.2	108A		4.8.35	30 days @ 85°C, OCXO @25°C 1000h, 2000h, 8000h @85°C

Other environmental conditions on request

Data sheet is for information purposes only and may be subject to modifications or may be discontinued without notice.

Revision History

Rev.	Drawing	Date [dd.mm.yyyy]	Remarks	Author	Checked
1	D1	01.10.2012	Editorial changes	BN	BN
1	D2	04.04.2014	Environmental conditions updated, editorial changes	HH	HH